



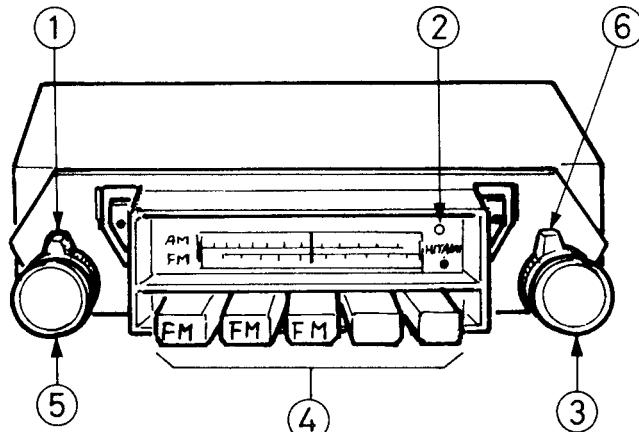
HITACHI

KMS-2521Z

SERVICE MANUAL

No.1125

Car Model	DATSON 280ZX (S130)
Front Speaker	B-3001ZFx1
Rear Speaker	B-2511Zx2
Motor Antenna	RO-89E
Antenna Feeder	RO-87F
Antenna Cap	RO-89(B)
Antenna Nut	RO-89(N)



KEY TO ILLUSTRATIONS

1 TONE CONTROL	4 TUNING SELECTOR
2 ANTENNA TRIMMER	5 POWER SWITCH/VOLUME CONTROL
3 TUNING CONTROL	6 BALANCE CONTROL

SPECIFICATIONS

TUNER SECTION

Circuit System: AM/FM MPX 2 band superheterodyne
Tuning Range: FM: 88 ~ 108 MHz
AM: 530 ~ 1605 kHz
Intermediate Frequency: FM: 10.7 MHz
AM: 455 kHz
Sensitivity: FM: 0 dB (max.), 12 dB (pra.)
AM: 15 dB (max.), 28 dB (pra.)
Antenna: Car antenna

GENERAL

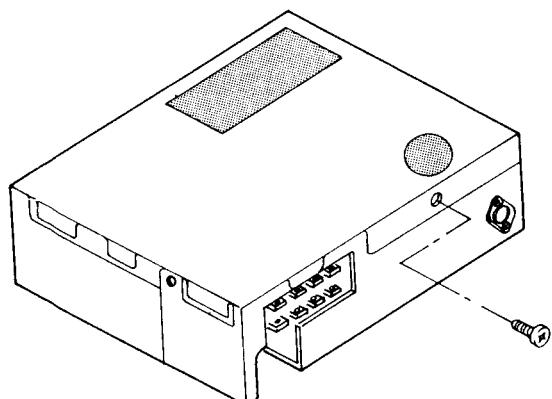
Semiconductors: 11 IC's, 1FET, 9 diodes
Power Supply: 12V (Car battery), Negative ground
Current Consumption: 100 mA (with no signal)
Output: 8W/CH (Max., 2Ω Load)
6W/CH (T.H.D. 10%, 2Ω Load)
Dimensions: 5.0cm(H)×16.0cm(W)×13.0cm(D)
Weight: 1.2kg

AM/FM 2 BAND CAR RADIO with FM STEREO

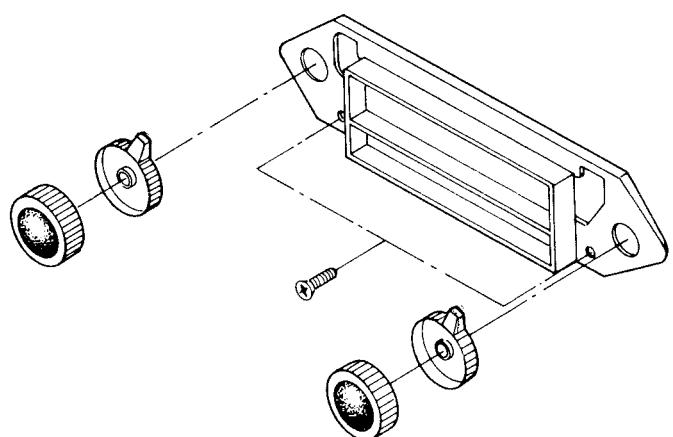
Oct. 1978

DISASSEMBLY

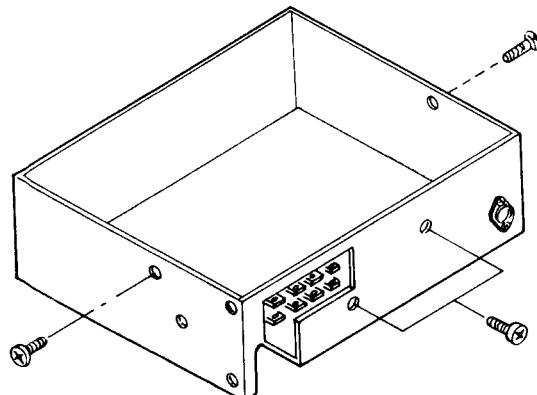
1. Removal of Upper Cover



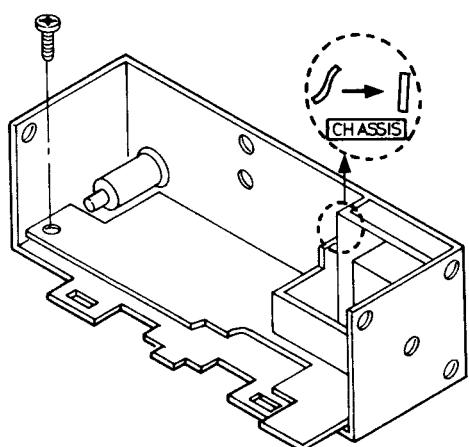
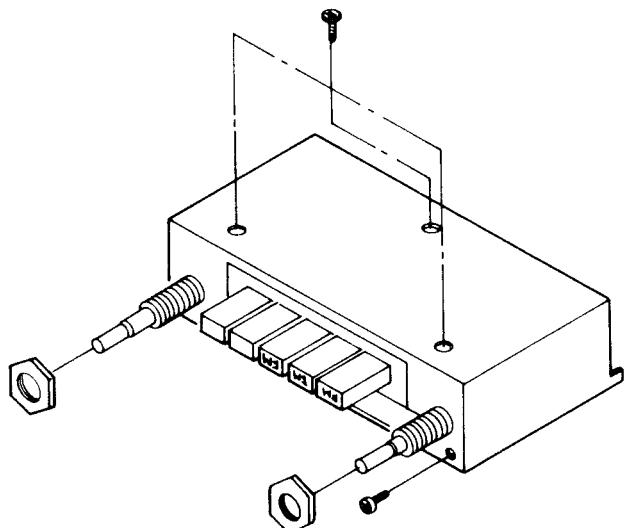
3. Removal of Nose Escutcheon



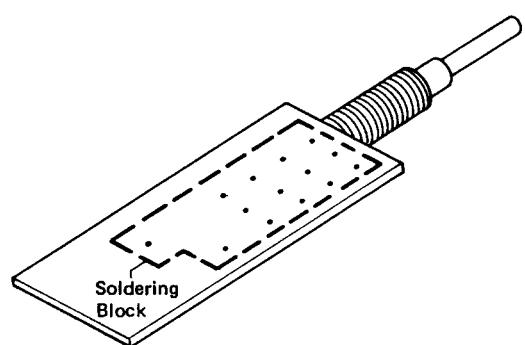
2. Removal of Rear Case



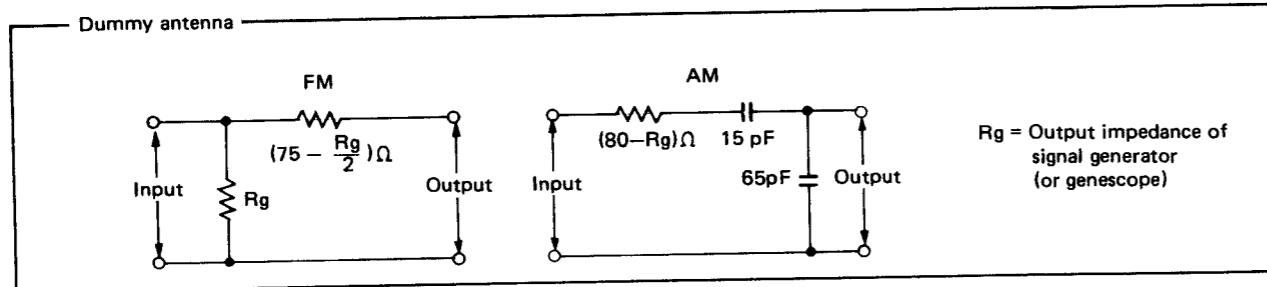
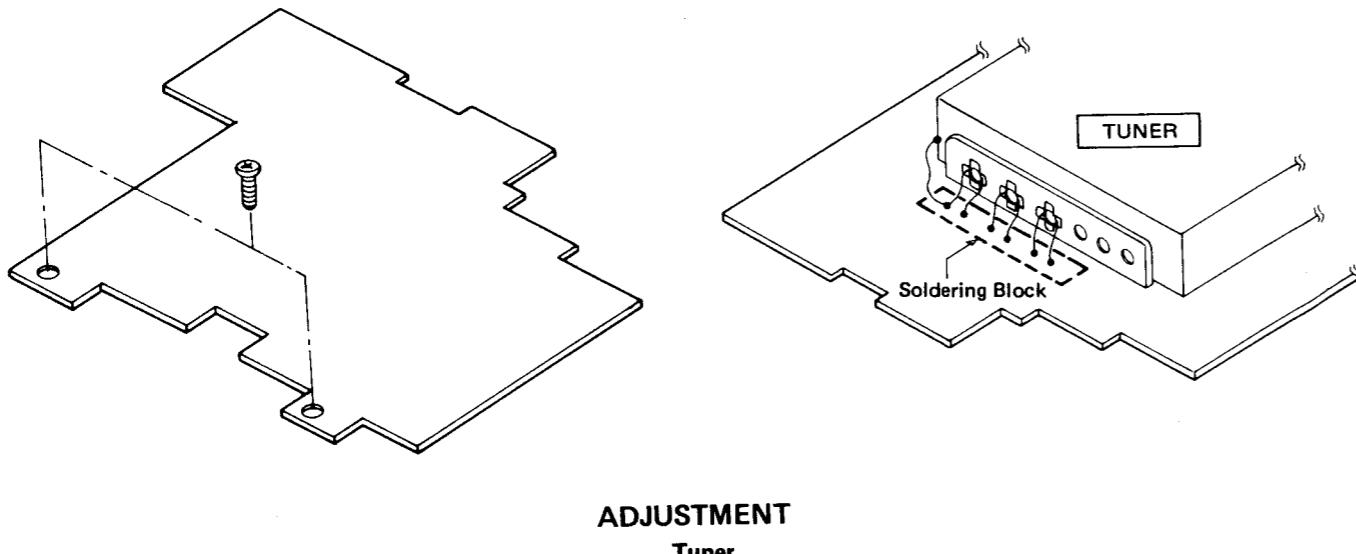
4. Removal of Front Case



5. Removal of Volume P.C.B.



6. Removal of Radio P.C.B.



FM IF & Discr. adjustment

Symbol No.	Controls	Position
RT201	FM sensitivity adjustment	Middle
RV401A, B	Tone control	High
RV402A, B	Volume control	Minimum
RV503A, B	Balance control	Center

3. Adjustment

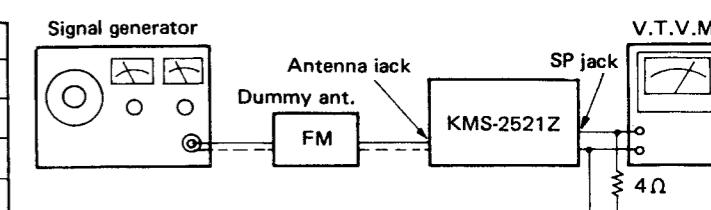
Item	Genescope	Dial pointer position	Adjust	Reading	Remarks
1 2 3	FM IF	10.7 MHz	T202	—	Turn the T202 fully counterclockwise.
			T101 T201	Max.	Reduce the level of the genescope so that the waveform will be one.
			T202	—	Adjust the T202 so that the output is like the S curve for symmetrical sinewave.

FM RF (Covering & Tracking) adjustment

1. Setting

Symbol No.	Controls	Position
RT201	FM sensitivity adjustment	Middle
RV401A, B	Tone control	High
RV402A, B	Volume control	Maximum
RV503A, B	Balance control	Center

2. Connection



3. Adjustment

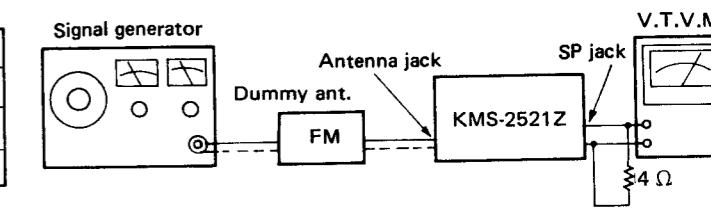
Item	Signal generator		Dial pointer position	Adjust	Reading	Remarks
	Frequency	Modulation				
1	Covering	87 MHz	400Hz 30%	Lowest	CT103	Max.
	Tracking	98 MHz		98 MHz	CT101, CT102	

FM sensitivity adjustment

1. Setting

Symbol No.	Controls	Position
RV401A, B	Tone control	High
RV402A, B	Volume control	Maximum
RV503A, B	Balance control	Center

2. Connection



3. Adjustment

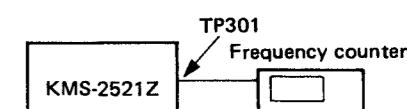
Item	Signal generator		Dial pointer position	Adjust	Reading	Remarks
	Frequency	Modulation				
1	98 MHz	400 Hz, 30%	98 MHz	RV402 A, B	1.41V	1.41V 3dB —63dB —74dB
		74 dB		RT 201	1.41V - 3 dB	

FM MPX (Multiplex) adjustment

1. Setting

Symbol No.	Control	Position
RV401A, B	Tone control	—
RV402A, B	Volume control	—
RV503A, B	Balance control	—

2. Connection



3. Adjustment

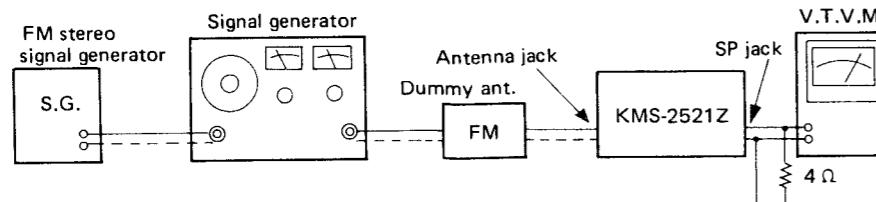
Adjust	Reading	Remarks
RT302	19 kHz + 100 Hz	—

FM Separation adjustment

1. Setting

Symbol No.	Controls	Position	Symbol No.	Controls	Position
RV401A, B	Tone control	—	RV402A, B	Volume control	—
RV503A, B	Balance control	Center			

2. Connection



3. Adjustment

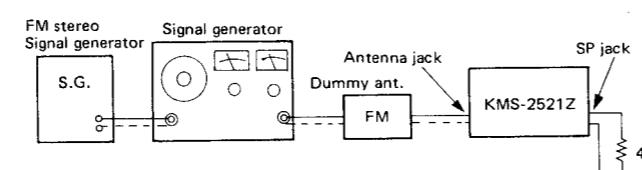
Signal generator		Dial pointer position	Adjust	Reading	Remarks
Frequency	Modulation				
98 MHz	Pilot: 19 kHz 10% L-ch.: 400 Hz 45% 74 dB	98 MHz	RT301	R-ch.: Min.	—

Automatic Sound Control System Adjustment

1. Setting

Symbol No.	Controls	Position
RV401A, B	Tone control	—
RV402A, B	Volume control	—
RV503A, B	Balance control	Center

2. Connection



3. Adjustment

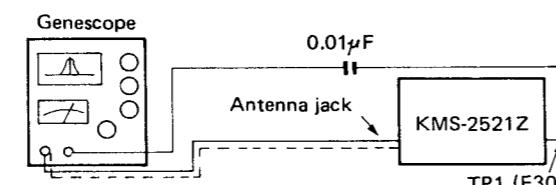
Signal generator		Dial pointer position	Adjust	Reading	Remarks
Frequency	Modulation				
98 MHz	Pilot: 19 kHz 10% (L+R) (L-R): 400 Hz 45% 33 dB + 1 dB	98 MHz	RT051	At the point of the FM stereo indicator turning on.	—

AM IF adjustment

1. Setting

Symbol No.	Controls	Position
RT251	AM sensitivity adjustment	Middle
RV401A, B	Tone control	High
RV402A, B	Volume control	Minimum
RV503A, B	Balance control	Center

2. Connection



3. Adjustment

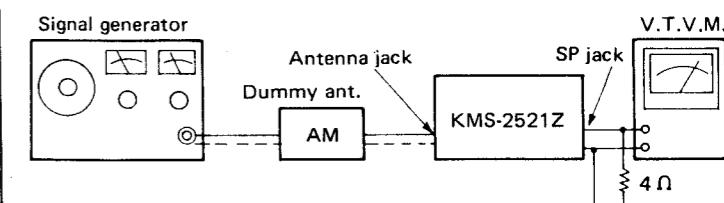
Genescope	Dial pointer position	Adjust	Reading	Remarks
455 kHz	Highest	T152 T251 T252	Max. 	Set the Band switch to the "AM" position.

AM RF (Covering & Tracking) adjustment

1. Setting

Symbol No.	Controls	Position
RT251	AM sensitivity adjustment	Middle
RV401A, B	Tone control	High
RV402A, B	Volume control	Maximum
RV503A, B	Balance control	Center

2. Connection



3. Adjustment

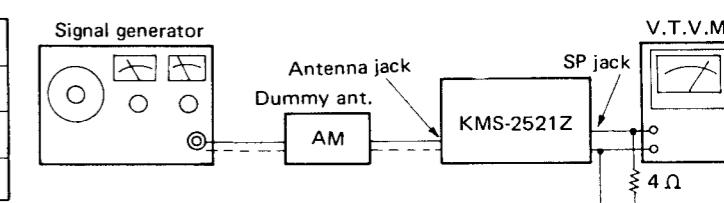
Item	Signal generator		Dial pointer position	Adjust	Reading	Remarks	
	Frequency	Modulation					
1	520 ± 5 kHz	400 Hz 30%	Lowest	T151	Max.	—	
2	1650 ± 10 kHz	Highest	CT154	CT152(Middle) CT153	Max.	—	
3 Repeat 1 and 2.							
4	Tracking	1400 kHz	400 Hz 30%	1400 kHz	CT151	—	
					CT152(Middle) CT153	Max.	

AM sensitivity adjustment

1. Setting

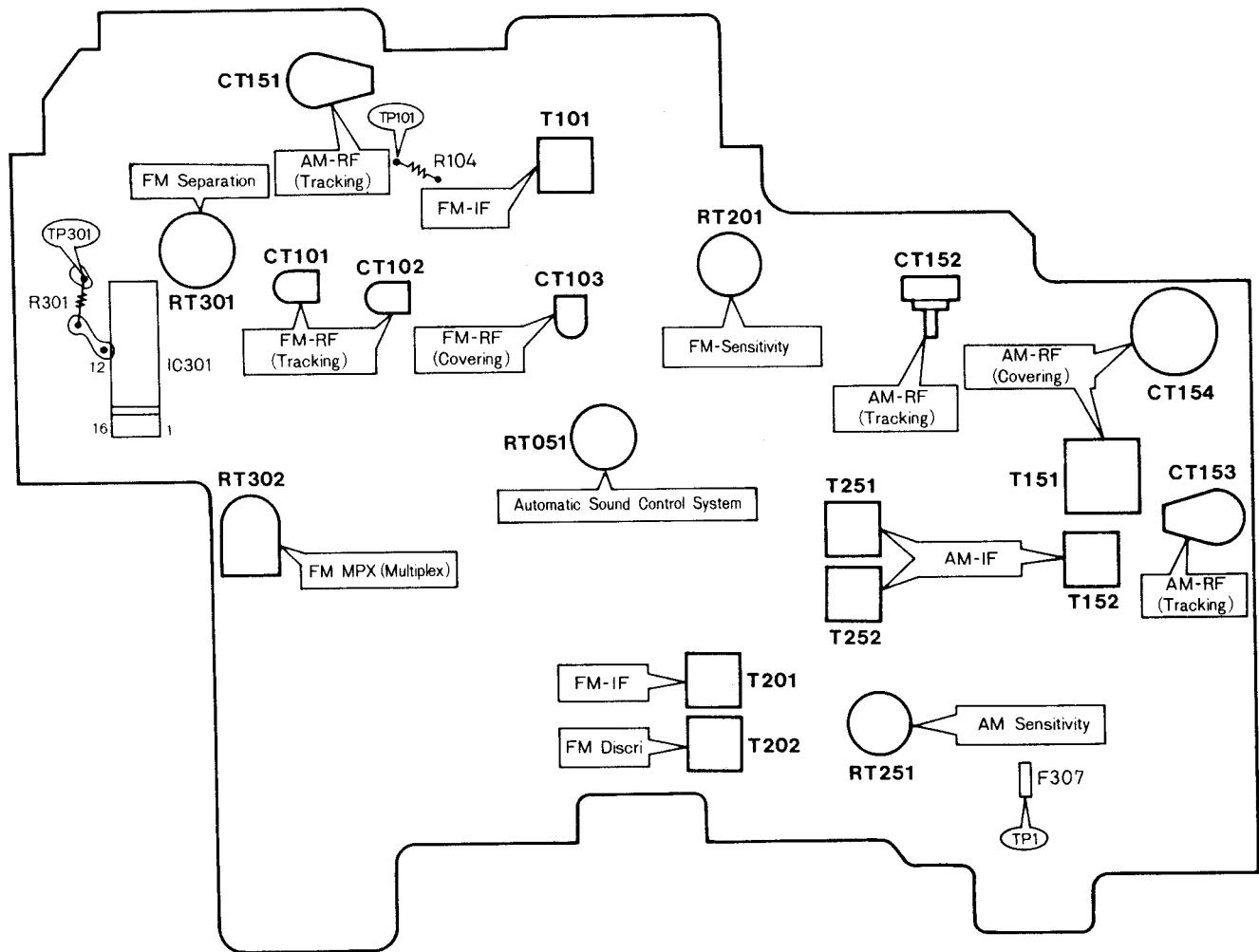
Symbol No.	Controls	Position
RV401A, B	Tone control	High
RV402A, B	Volume control	Maximum
RV503A, B	Balance control	Center

2. Connection



3. Adjustment

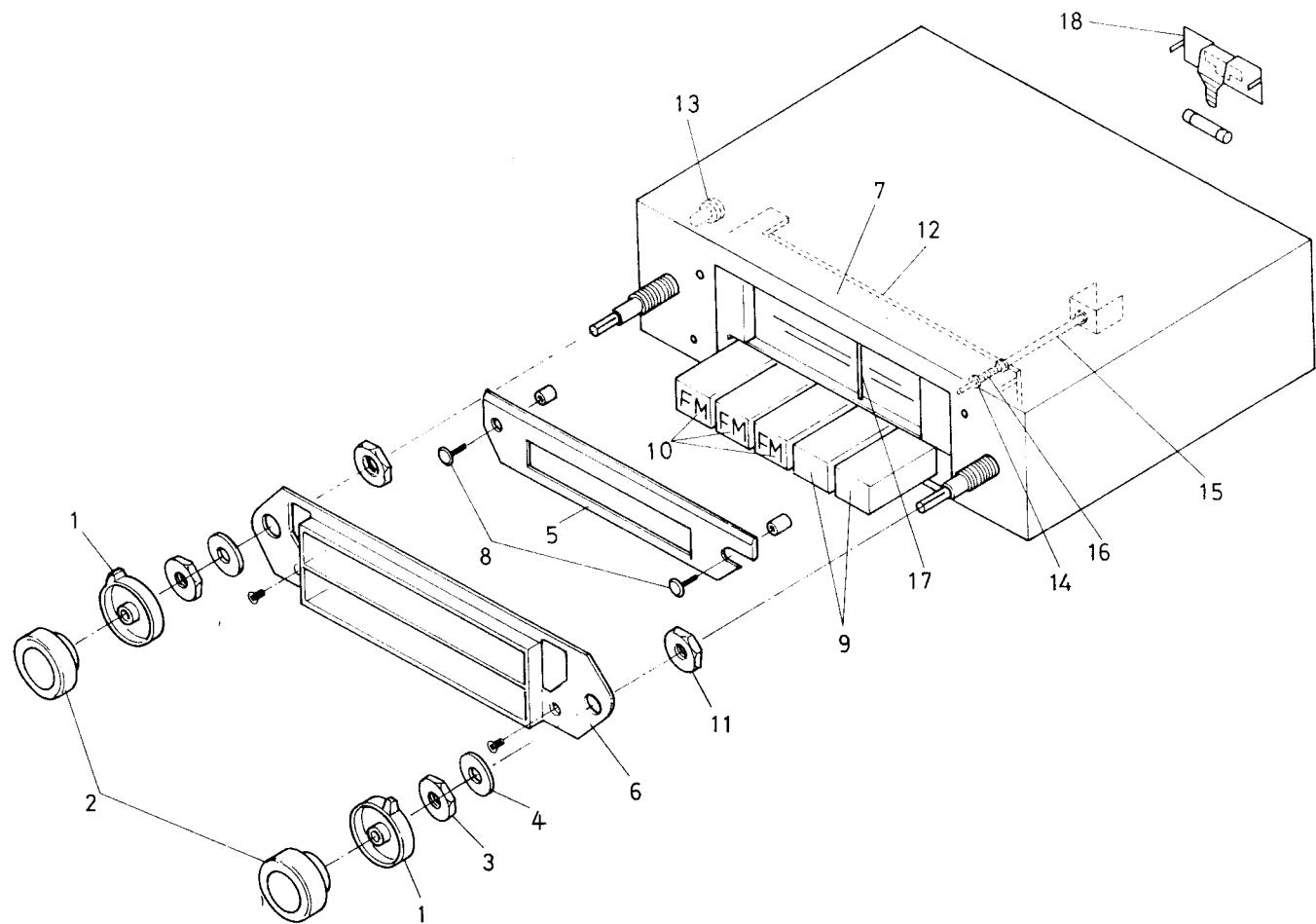
Signal generator	Dial pointer position		Adjust	Reading	Remarks
	Frequency	Modulation			
1000 kHz	400 Hz 30%	1000 kHz	RT251	15 dB	—



REPLACEMENT PARTS LISTE

SYMBOL-NO	P-NO	DESCRIPTION	SYMBOL-NO	P-NO	DESCRIPTION		
CAPACITORS							
CT101-103	5058091	TRIMMER 8PF	Q101	5320943	TRANSISTOR 2SK55-D		
CT151	5058104	TRIMMER 50PF	ZD201	5330313	DIODE SILICON HZ7C 1.0MHZ 400MW 200MICROS		
CT152	5058088	TRIMMER 20PF	ZD202	5330313	DIODE SILICON HZ7C 1.0MHZ 400MW 200MICROS		
CT153	5058104	TRIMMER 50PF	TRANSFORMERS				
CT154	0283104	TRIMMER 50PF	T101	5140021	FM IF		
C104	0246690	CERAMIC DISC. 10PF+-0.5PF	T151	0316099	OSCILLATOR 200MH		
C109	0246686	CERAMIC DISC. 8PF+-0.5PF	T152	5130032	AM IF 20KOHM : 1KOHM		
C115	0248341	CERAMIC DISC. 30PF+-5%	T201	5148035	FM DISCRIMINATOR		
C116	0248320	CERAMIC DISC. 10PF+-5% (N-470)	T202	5148034	FM IF		
C117	0248372	CERAMIC DISC. CAPACITOR 12PF +- 10%	T251	5130152	AM IF		
C118	0246422	CERAMIC DISC. 2PF+-0.5PF	T252	5130151	AM IF		
C119	0246424	CERAMIC DISC. 4PF+-0.5PF	COILS				
C161	0249595	CERAMIC DISC. 220PF+-10% (N-220)	L101	5150141	TRAP		
RESISTORS					L103 5150811 CHOKE 7.9UH		
RC201	5065021	CR PACK	L105	5150141	TRAP		
RT051	0151882	VARIABLE 470 OHM	L151	5150067	CHOKE 7MICROH		
RT201	0151882	VARIABLE 470 OHM	L154	5152068	PEAKING		
RT251	0151884	VARIABLE 2.2KOHM B	MISCELLANEOUS				
RT301	0151883	SEMI VARIABLE 1KOHM B		5583504	TUNER		
RT302	0151808	SEMI VARIABLE 10K OHM RS88		5651142	5P CONNECTOR SOCKET		
RV401AB	5003271	VARIABLE 20KOHM(A)		7108273	POWER UNIT		
RV402AB	5003271	VARIABLE 20KOHM(A)	ANT,J	5675011	ANTENNA JACK		
RV503AB	5008371	TUNER VOLUME	CF201	5160213	CERAMIC FILTER CF-107		
SEMI-CONDUCTORS			CF251	5160081	CERAMIC FILTER 455KHZ		
D051	5330131	DIODE SILICON 152076 100MHZ 250MW 5NS	F601	0591138	FUSE 2A		
D101	5330661	DIODE SILICON LS2790 200MHZ 80MW	NL151	0594094	NEON LAMP 100 V		
D201	0575019	DIODE 1N60P	PL301	5762037	LAMP		
D202	0575019	DIODE 1N60P	PL601	5762037	LAMP		
D601	5330104	DIODE SILICON V06A 15KHZ 1.8W	PL602	5762037	LAMP		
D602	5330104	DIODE SILICON V06A 15KHZ 1.8W	PL603	5760404	LAMP		
D603	5330101	DIODE SILICON V06C 15KHZ 1.8W	FOR ACCESSORIES				
IC051	5356802	IC TA2035		5406332	SPEAKER ASSEMBLY-10CM		
IC101	5356761	IC TA2031		6102481	SPEAKER ASSEMBLY-12 CM		
IC102	5356772	IC TA2032	MISCELLANEOUS				
IC151	5351161	IC HA1199	1	6294931	KNOB (L) FOR TUNING		
IC201	5356782	IC TA2033	2	6294881	KNOB ASSEMBLY (L)		
IC202	5356782	IC TA2033	3	0643135	NUT - 9MM		
IC203	5351441	IC AN278	4	0629187	9D WASHER		
IC251	5356792	IC TA2034	5	6474673	FIN SCALE PLATE		
IC301	5350683	IC HA11227	6	6241721	NOSE ESCUTCHEON		
IC501AB	5350554	IC HA1366W	7	6474681	SCALE PLATE		
			8	6714216	NYLON RIVET		

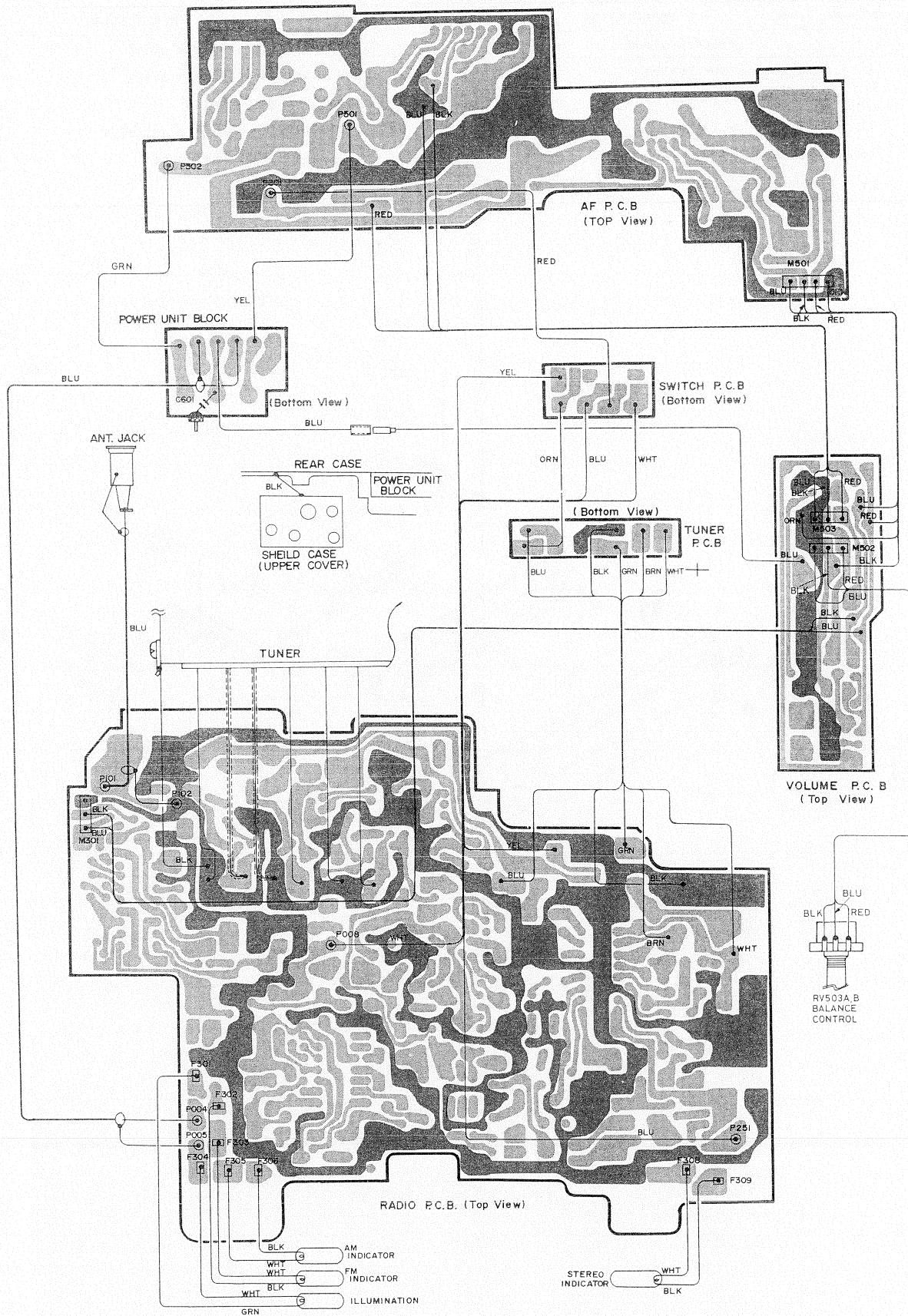
SYMBOL-NO	P-NO	DESCRIPTION	SYMBOL-NO	P-NO	DESCRIPTION
MISCELLANEOUS					
9	6252381	PUSH BUTTON	14	6748212	TRIMMER JOINT
10	6252382	PUSH BUTTON	15	7543331	TRIMMER SHAFT
11	0643135	NUT-9MMD	16	6310321	SPRING
12	6481681	BACK PLATE	17	6399692	POINTER ASSEMBLY
13	7575773	COLLAR CAP (ORANGE)-FOR PILOT LAMP(L503)	18	6172102	FUSE COVER



WIRING DIAGRAM

: Ground

+B, Signal



CIRCUIT BOARD DIAGRAM

: Ground

+B, Signal

IC202

1	0 V
2	7.5 V
3	—
4	2.4 V
5	7.8 V

IC201

1	0 V
2	7.5 V
3	—
4	2.4 V
5	7.8 V

IC102

1	0 V
2	5.36 V
3	7.64 V
4	—
5	5.98 V

IC101

1	0 V
2	1.78 V
3	7.64 V
4	7.64 V
5	1.78 V

Q101

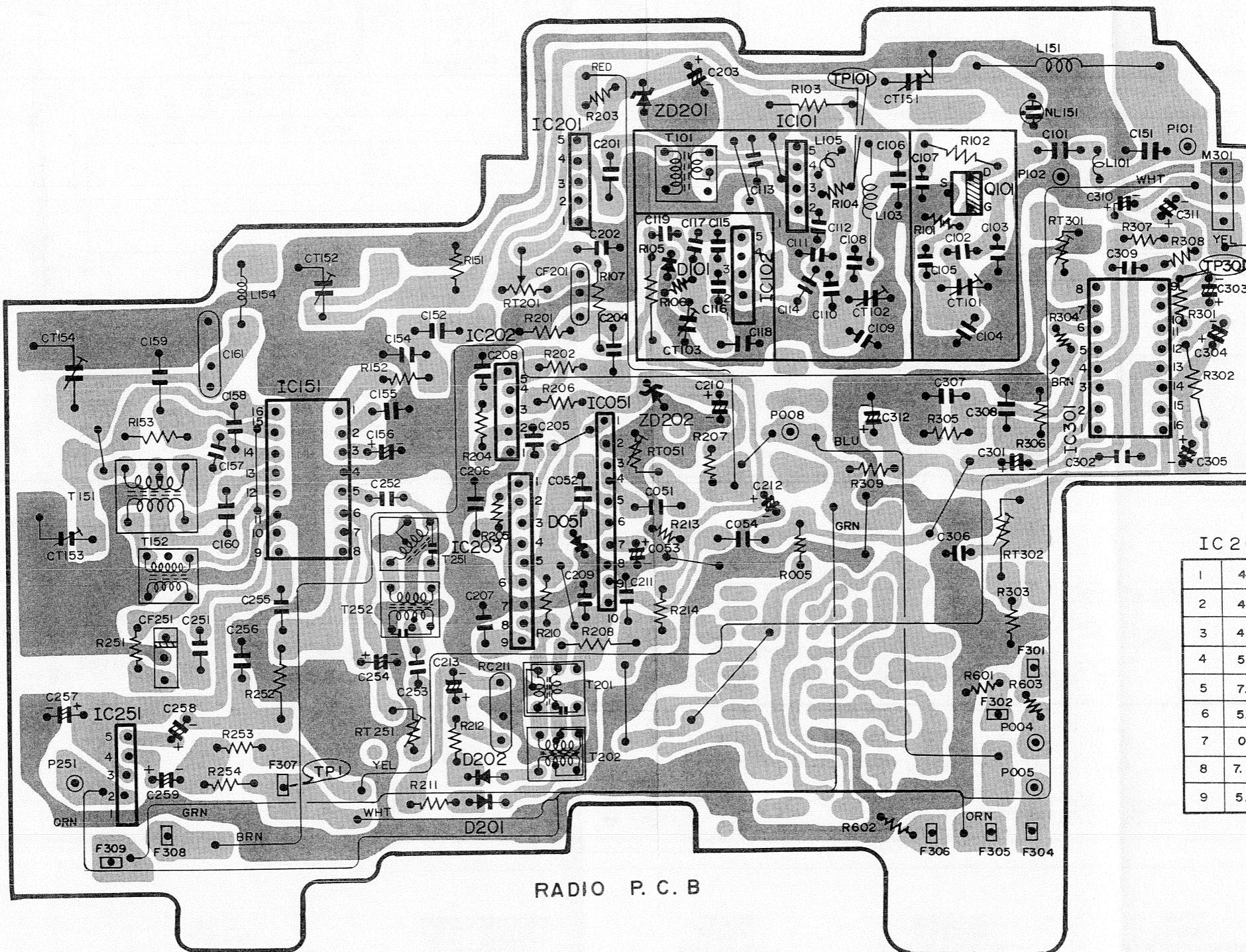
D	6.5 V
G	0 V
S	0 V

IC 151

1	2.29 V
2	0.97 V
3	0.61 V
4	0 V
5	8 V
6	0.73 V
7	2 V
8	2.24 V
9	11.57 V
10	2.23 V
11	0 V
12	10.75 V
13	3.7 V
14	1.4 V
15	10.73 V
16	10.73 V

IC251

1	0 V
2	13.2 V
3	11.59 V
4	5.63 V
5	3.28 V



IC 301

1	11.16 V
2	1.44 V
3	1.8 V
4	1.16 V
5	1.11 V
6	2.15 V
7	0 V
8	0.44 V
9	0.67 V
10	1.51 V
11	1.51 V
12	1.12 V
13	1.52 V
14	1.52 V
15	1.52 V
16	1.93 V

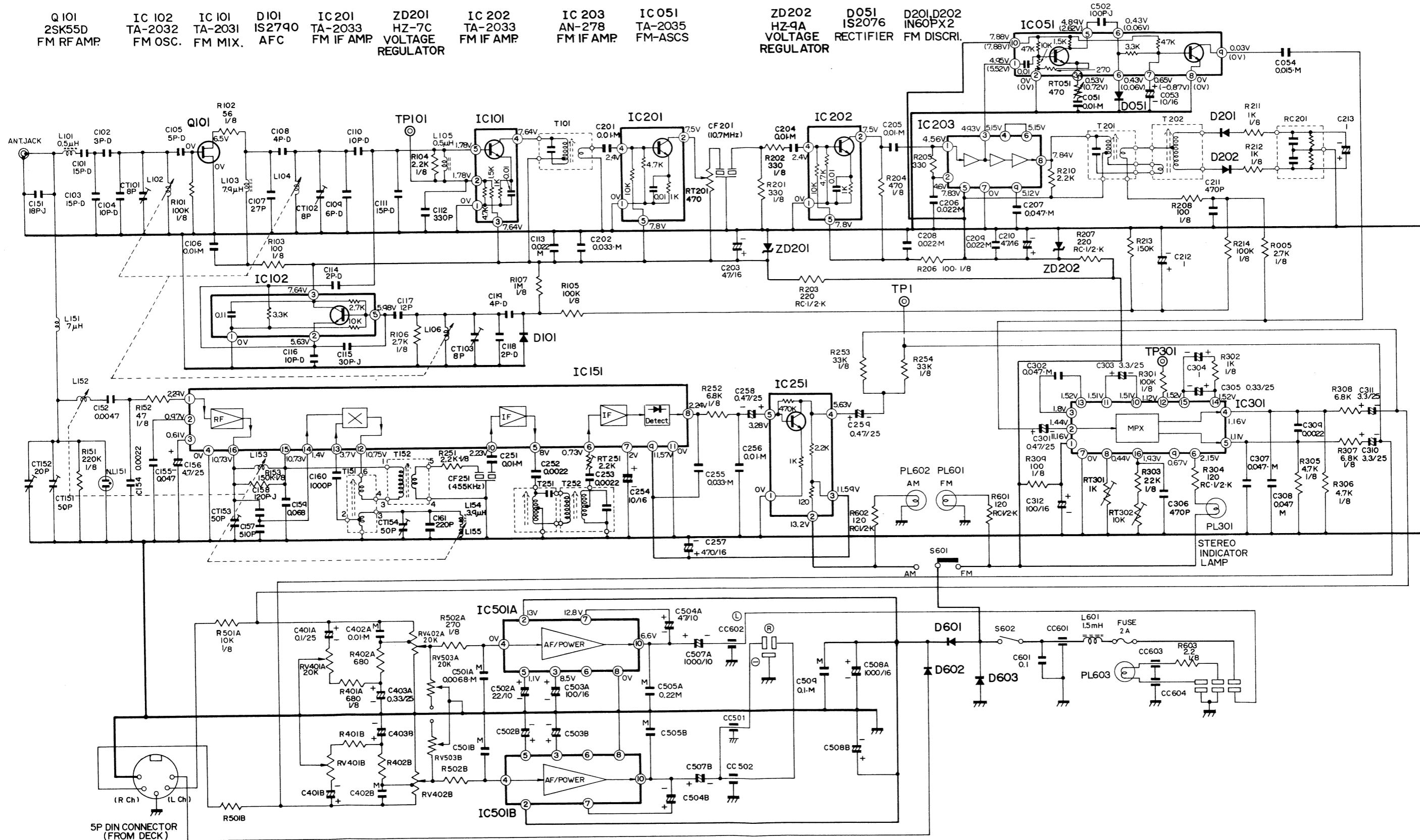
IC 203

1	4.56 V
2	4.6 V
3	4.93 V
4	5.15 V
5	7.83 V
6	5.15 V
7	0 V
8	7.84 V
9	5.12 V
10	7.88 V

IC051 ON OFF

1	4.95 V
2	0 V
3	0.53 V
4	0.53 V
5	7.83 V
6	4.89 V
7	2.62 V
8	0.43 V
9	0.06 V
10	0 V
11	0.65 V
12	-0.87 V
13	7.84 V
14	0 V
15	5.12 V
16	0 V
17	0.03 V
18	0 V
19	7.88 V
20	7.88 V

SCHEMATIC DIAGRAM



IC151
HA-1199
AM RF CONV. IF DET.

IC 501A,B
HA1366W
AF POWER AMP

IC 251
TA-2034
AM AF AN

D601, D602, DE
VO6AX2, VO
PROTECTOR

IC 301
HA-11227
FM MPX. STEREO DECODE

CIRCUIT BOARD DIAGRAM

: Ground

: +B, Signal

Note

1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

Circuit No.	
Value	No indicated Ω (Ohm) M : 1000 k Ω
Tolerance	No indicated $\pm 5\%$ K : $\pm 10\%$ M : $\pm 20\%$
Wattage	No indicated $\frac{1}{4}W$
Sort	No indicated Carbon film RC : Composition RW : Wire wound RS : Oxide metal film RN : Fixed metal film

Circuit No.	
Value	No indicated μF P : PF
Tolerance	No indicated $\pm 10\%$ J : $\pm 5\%$ M : $\pm 20\%$ Z : $\pm 80\%$, -20% D : $\pm 0.5pF$ C : $\pm 0.25pF$
Sort	Ceramic Electrolytic Mylar Polyester Styrol
Voltage	No indicated 50WV

3. Be sure to make your orders of resistors and capacitors with value, voltage, tolerance and sort.
4. When replacing capacitors marked with \ast , use specified ones stated on parts list since required temperature characteristics.

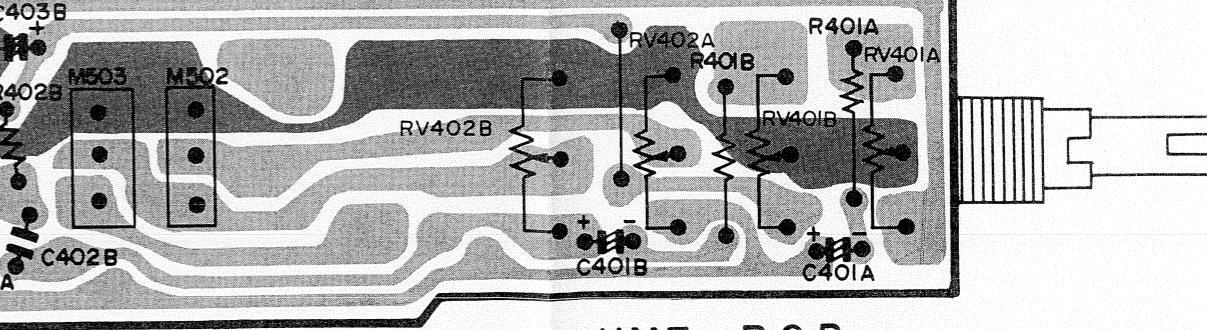
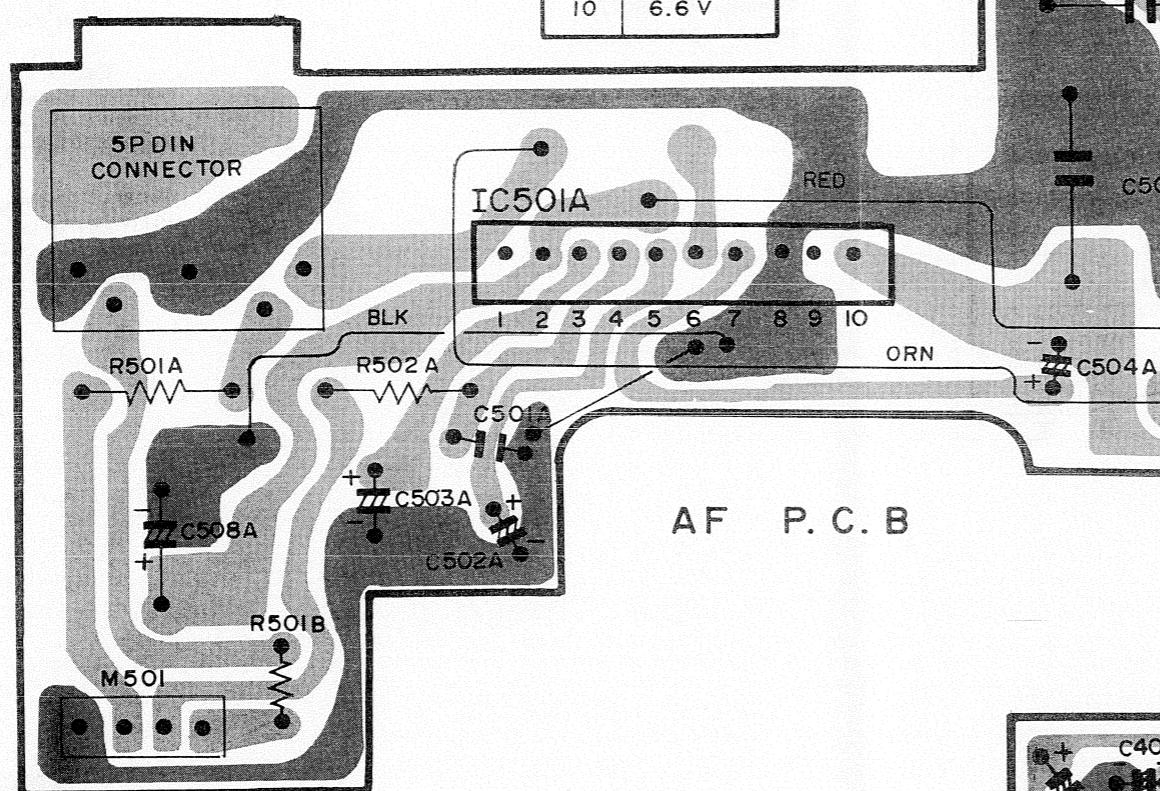
IC501A

1	-
2	13V
3	8.5 V
4	0 V
5	1.1 V
6	-
7	12.8 V
8	0 V
9	-
10	6.6 V

IC501B

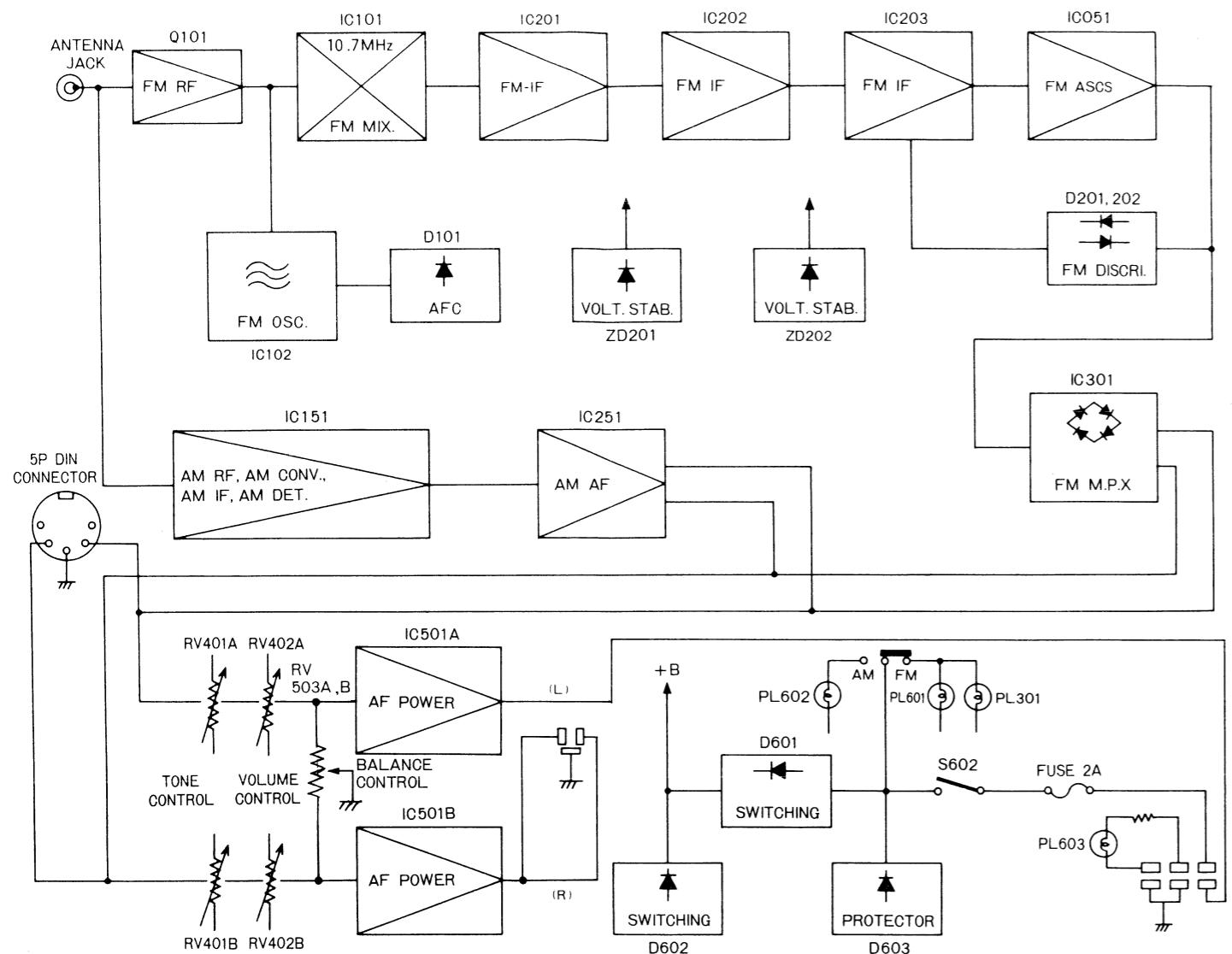
1	-
2	13 V
3	8.5 V
4	0 V
5	1.1 V
6	-
7	12.8 V
8	0 V
9	-
10	6.6 V

AF P.C.B



VOLUME P.C.B

BLOCK DIAGRAM



HITACHI PARTS ORDERING INFORMATION

To receive original replacement parts, please contact your nearest HITACHI Parts Distributor or contact Hitachi Central Parts Warehouse listed below. Be sure to indicate part catalog number, part description and model number (located on back of product).

PANSON ELECTRONICS
28-14 Steinway St.
Astoria, NY 11103
Phone #212-545-8888

TEL-VIDEO CORPORATION
1921 N. Milwaukee Avenue
Chicago, IL 60647
Phone #312-235-6190

HITACHI SALES CORPORATION OF AMERICA
Central Parts Warehouse
401 W. Artesia Blvd.
Compton, CA 90220
Phone #213-537-8383

HITACHI SERVICE MANUALS

To order HITACHI Service Manuals contact:

HITACHI SALES CORPORATION OF AMERICA
Central Parts Warehouse
401 W. Artesia Blvd.
Compton, CA 90220
Phone #213-537-8383

For information concerning repairs, operation or technical assistance, please contact the Service Manager of the nearest Hitachi Regional Office, Service Division listed:

Southern Regional Office
510 Plaza Dr.
College Park, GA 30349
Phone #404-763-0360

Mid-Western Regional Office
1600 Morse Avenue
Elk Grove Village, IL 60007
Phone #312-593-1550

Eastern Regional Office
1200 Wall Street West
Lyndhurst, NJ 07071
Phone # 201-935-8980

Western Regional Office
401 W. Artesia Blvd.
Compton, CA 90220

Western Regional Office
401 W. Artesia Blvd.
Compton, CA 90220
Phone # 213-537-8383

HITACHI SALES CORPORATION OF AMERICA
Eastern Regional Office
1200 Wall Street West, Lyndhurst, New Jersey 07071
Tel. 201-935-8980

Mid-Western Regional Office
1400 Morse Ave., Elk Grove Village, Ill. 60007
Tel. 312-593-1550

Southern Regional Office
510 Plaza Drive College Park, Georgia 30349
Tel. 404-763-0360

Western Regional Office
401 West Artesia Boulevard, Compton, California 90220
Tel. 213-537-8383

HITACHI SALES CORPORATION OF HAWAII, INC
743-G Waiakamilo Rd., Honolulu, Hawaii 96817
Tel. 808-841-0431

